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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,411	02/10/2004	Glenn Gaarder	084061-0573	9748
22879	7590	08/09/2007	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			MORRISON, THOMAS A	
ART UNIT		PAPER NUMBER		
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MAIL DATE		DELIVERY MODE		
08/09/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/775,411	GAARDER ET AL.
	Examiner	Art Unit
	Thomas A. Morrison	3653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 17 May 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-3,5-14,16-25 and 30-37 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 16-24 is/are allowed.
- 6) Claim(s) 1-3,5,6,10-14,25,30 and 33-37 is/are rejected.
- 7) Claim(s) 7-9,31 and 32 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Claim Objections

1. Claims 35 and 37 are objected to because of the following informalities: (1) claim 35 has a ")" after the period on line 3 that should be deleted; (2) there should be a ")" to the right of "New" in line 1 of claim 35; and (3) there should be a period at the end of line 4 in claim 37. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 33 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 33 recites the limitation "the document processing module" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 37 recites the limitation "the document processing module" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 5-6, 10, 12-14, 25, 30 and 33-37 are rejected under 35 U.S.C. 102(b) as anticipated by U.S. Patent No. 5,419,543 (Nakamura et al.) or, in the alternative, under 35 U.S.C. 103(a) as obvious over the Nakamura et al. patent in view of U.S. Patent No. 5,742,318 (Miyauchi et al.).

Regarding claim 1, Figs. 1-3 of Nakamura et al. show a sheet transfer apparatus (Fig. 1) comprising:

a first roller (21) configured to be rotatably driven at a first surface speed;

a second roller (5) spaced from the first roller (21) such that the first roller (21) and the second roller (5) are configured to simultaneously engage a media sheet, wherein the second roller (5) is configured to be driven at a second surface speed greater than the first surface speed; and

a power train delivering power to the first roller (21) to rotatably drive the first roller (21), the power train including:

a first gear (unnumbered gear between elements 55 and 5) coupled to the first roller (21);

a second gear (55); and

a third gear (64) movable between a first position (Figs. 1 and 2) in which the third gear (64) is in power-transmitting engagement with the first gear (unnumbered gear between elements 55 and 5) and the second gear (55) and a second position (dotted arrow in Fig. 2) in which the third gear (64) is out of engagement with the second gear (55). Regarding the recitation, "wherein the second roller is configured to be driven at a second surface speed greater than the first surface speed", the sizes of the gears (i.e., gear 55, the unnumbered gear between elements 55 and 5, and the gear attached to element 5) are such that the second roller (5) will be driven at a speed that is faster than the speed of the first roller (21). Alternatively, it would have been obvious to one of ordinary skill in the art at the time the invention was made to dimension the gears such that the second roller (5) is driven at a greater speed than the first roller (21) for the purpose of applying the proper tension to the sheet conveyed by the first and second rollers, as taught by the Miyauchi et al. patent. See, e.g., Abstract of Miyauchi et al.

Regarding claim 2, in the recitation "wherein the first gear and the first roller are configured such that a dwell between the first gear and the first roller is created **upon the first roller and the second roller simultaneously engaging the media sheet**", the bolded portion is a conditional limitation that need **not** ever occur. Thus, the entire recitation need **not** be given patentable weight.

Regarding claim 3, the third gear (64) is in the first position as the dwell is being created. Based on the rejection of claim 2 above, the dwell is a conditional limitation that need not occur.

Regarding claim 5, the third gear (64) of Nakamura et al. remains in the first position (Figs. 1 and 2) upon the first roller (21) and the second roller (5) simultaneously engaging the media sheet.

Regarding claim 6, in the recitation “wherein the first roller is configured to rotate relative to the first gear **upon the first roller and the second roller simultaneously engaging the media sheet**”, the bolded portion is a conditional limitation that need not ever occur. Thus, the entire recitation need **not** be given patentable weight.

Regarding claim 10, the first roller (21) of Nakamura et al. is a pre-feed roller and wherein the second roller (5) is a separation roller.

Regarding claim 12, Fig. 1 of Nakamura shows a frame rotatably supporting the first roller (21) and the second roller (5).

Regarding claim 13, Figs. 1-2 of Nakamura et al. show that the power train extends between the first roller (21) and the second roller (5).

Regarding claim 14, different elements are relied upon to reject this claim than those applied above in the rejection of claim 1. Thus, the entire claim 14 including all of the elements of claims 1 and 12 is included in the rejection below. For claim 14, Figs. 1-3 of Nakamura et al. show a sheet transfer apparatus (Fig. 1) comprising:

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a first roller (21) configured to be rotatably driven at a first surface speed;

a second roller (5) spaced from the first roller (21) such that the first roller (21) and the second roller (5) are configured to simultaneously engage a media sheet, wherein the second roller (5) is configured to be driven at a second surface speed greater than the first surface speed; and

a power train delivering power to the first roller (21) to rotatably drive the first roller (21), the power train including:

a first gear (unnumbered gear connected to element 62) coupled (i.e., indirectly coupled via elements 64 and 55) to the first roller (21);

a second gear (55); and

a third gear (64) movable between a first position (Figs. 1 and 2) in which the third gear (64) is in power-transmitting engagement with the first gear (unnumbered gear connected to element 62) and the second gear (55) and a second position (dotted arrow in Fig. 2) in which the third gear (64) is out of engagement with the second gear (55). Regarding the recitation, "wherein the second roller is configured to be driven at a second surface speed greater than the first surface speed", the sizes of the gears (i.e., gear 55, the unnumbered gear between elements 55 and 5, and the gear attached to element 5) are such that the second roller (5) will be driven at a speed that is faster than the speed of the first roller (21). Alternatively, it would have been obvious to one of ordinary skill in the art at the time the invention was made to dimension the gears such that the second roller (5) is driven at a greater speed than the first roller (21) for the

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purpose of applying the proper tension to the sheet conveyed by the first and second rollers, as taught by the Miyauchi et al. patent. See, e.g., Abstract of Miyauchi et al.

Also, Fig. 1 of Nakamura et al. shows a frame rotatably supporting the first roller (21) and the second roller (5).

In addition, Figs. 1-2 of Nakamura et al. show that the power train includes a fourth gear (unnumbered gear on roller 5) coupled to the second roller (5) and a fifth gear (unnumbered gear between elements 55 and 5) coupled between the fourth gear (unnumbered gear on roller 5) and the second gear (55).

Regarding claim 25, Figs. 1-3 of Nakamura et al. shows a sheet transfer apparatus (Fig. 1) comprising:

a first roller (21) configured to be rotatably driven at a first surface speed;

a second roller (5) spaced from the first roller (21) such that the first roller (21) and the second roller (5) are configured to simultaneously engage a media sheet, the second roller (5) being configured to be driven at a second surface speed greater than the first surface speed;

a drive gear (55) operably coupled to the first roller (21); and

means for cessating transmission of power (including 61) to the drive gear (55) while creating a dwell after the first roller (21) and the second roller (5) have initially and simultaneously engaged a media sheet. Regarding the recitation, "the second roller being configured to be driven at a second surface speed greater than the first surface

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speed", the sizes of the gears (i.e., gear 55, the unnumbered gear between elements 55 and 5, and the gear attached to element 5) are such that the second roller (5) will be driven at a speed that is faster than the speed of the first roller (21). Alternatively, it would have been obvious to one of ordinary skill in the art at the time the invention was made to dimension the gears such that the second roller (5) is driven at a greater speed than the first roller (21) for the purpose of applying the proper tension to the sheet conveyed by the first and second rollers, as taught by the Miyauchi et al. patent. See, e.g., Abstract of Miyauchi et al. Regarding the recitation "means for cessating transmission of power to the drive gear while creating a dwell **after the first roller and the second roller have initially and simultaneously engaged a media sheet**" (emphasis added), it is the examiner's position that the elements of portion 61 rotate gear 64 to the dotted arrow position of Fig. 2 at some time **after** the first roller (21) and the second roller (5) have initially and simultaneously engaged a media sheet and before the feeding of the next sheet. During this time there is a dwell (i.e., a time delay) before gear 64 is rotated back to the position shown in Fig. 1, in which gear 64 engages the drive gear (55) again. Thus, all of the limitations of claim 25 are met.

Regarding claim 30, in the recitation "wherein the first gear moves the third gear to the second position **upon a maximum dwell being attained**", the bolded portion is a conditional limitation that need **not** ever occur. Thus, the entire recitation need **not** be given patentable weight.

Regarding claim 33, as best understood, Fig. 1 of Nakamura et al. shows that the sheet transfer apparatus (Fig. 1) is configured for use with a document processing

apparatus (including 3) and wherein the first roller (21) and the second roller (5) are configured to engage the media sheet prior to the media sheet being interacted upon by the document processing module (7).

Regarding claim 34, the power train is configured to remain operably coupled to the second roller (5) to rotatably drive the second roller (5) when the third gear (64) is in the second position (dotted arrow in Fig. 2). For example, the first gear (unnumbered gear between elements 55 and 5) will continue to drive the second roller (5) as long as the first roller (21) is rotating and driving the first gear. The first roller (21) will have a certain amount of movement via momentum after gear 64 moves away from gear 55.

Alternatively, it is noted that in claim 34 in the recitation “wherein the power train is configured to remain operably coupled to the second roller to rotatably drive the second roller **when the third gear is in the second position**”, the bolded portion is a conditional limitation that need **not** ever occur. Thus, the entire recitation need **not** be given patentable weight. In either case, the limitations of claim 34 are met.

Regarding claim 35, in the recitation “wherein the power train is configured **such that simultaneous engagement of the media sheet by the first roller and the second roller drives the third gear to the second position**”, this bolded portion of the recitation has not been given any patentable weight in view of MPEP, section 2114. Specifically, MPEP, section 2114 states that, “While features of an apparatus may be recited either structurally or functionally, claims< directed to >an< apparatus must be distinguished from the prior art in terms of structure rather than function.” See MPEP,

section 2114. Thus, it is the examiner's position that all of the features of claim 35 are met.

Alternatively, it is noted that in claim 35 in the recitation "wherein the power train is configured such that **simultaneous engagement of the media sheet by the first roller and the second roller drives the third gear to the second position**", the bolded portion is a conditional limitation that need **not** ever occur. Thus, the entire recitation need **not** be given patentable weight. In either case, the limitations of claim 35 are met.

Regarding claim 36, whatever mechanism(s) move gear 64 from the second position (dotted arrow in Fig. 2) back to the first position (Figs. 1 and 2) can be considered to be means for consuming the dwell upon initial disengagement of the media sheet from the first roller (21).

Regarding claim 37, as best understood, Fig. 1 of Nakamura et al. shows that the sheet transfer apparatus (Fig. 1) is configured for use with a document processing apparatus (including 3) and wherein the first roller (21) and the second roller (5) are configured to engage the media sheet prior to the media sheet being interacted upon by the document processing module (7).

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,419,543 (Nakamura et al.) by itself or in combination with U.S. Patent No. 5,742,318 (Miyauchi et al.) as applied to claim 1 above, and further in view of U.S. Patent Publication No. 20020179222. The Nakamura et al. patent by itself or in

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combination with the Miyauchi et al. patent discloses all of the elements of claim 11, except for the third gear including elastomeric teeth.

U.S. Patent Publication No. 20020179222 discloses that it is well known to provide a sheet transfer apparatus (Fig. 1) with an elastomeric gear drive system, for the purpose of driving a plurality of rollers (32 and 34). See e.g., Fig. 5 and numbered paragraph [0049]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the power train of the Nakamura et al. patent with a gear drive system (including first, second and third gears) that is elastomeric, for the purpose of driving the rollers 21 and 5) of Nakamura et al. With the gears being elastomeric, it is the examiner's position that the teeth of the gears can also be considered elastomeric.

Response to Arguments

5. Applicant's arguments filed 5/15/2007 have been fully considered but they are not persuasive..

Applicant argues

Neither Nakamura nor Miyauchi, alone or in combination, disclose a first gear coupled to a first roller, a second-gear and a third gear movable between (1) a first position in which the third gear is in power-transmitting engagement with the first gear and the second gear and (2) a second position in which the gear is out of engagement with the second gear.

The Office Action characterizes planet gear 64 of Nakamura as the "third gear". The Office Action characterizes gear 55 as a second gear. The Office Action further attempts to characterize the gear between gears 55 and the gear of roller 5 as the "second gear" of claim 1. However, this is an improper characterization of such gears of Nakamura so as to read upon claim 1. The gear between element 55 and 5 of Nakamura cannot be characterized as a first gear since gear 64 (characterized as the "third-gear" is never in engagement with both

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this gear and gear 55 as set forth in a claim limitation "a third gear movable between a first position in which a third gear is in power-transmitting engagement with the first gear and the second gear. One of ordinary skill in the art would clearly understand that when two gears are described as being engaged, they are in interlocking or inter-meshing contact with one another. Gear 64 is never in interlocking or inter-meshing contact with the unnumbered gear between elements 5 and 55 of Nakamura.

In response, claim 1 recites "a third gear movable between a first position in which the third gear is in **power-transmitting engagement** with the first gear and the second gear and a second position in which the third gear is out of engagement with the second gear". This claim does **not** require **direct** engagement between the third gear, the first gear and the second gear. Rather, this claim requires power-transmitting engagement between the third gear, the first gear and the second gear. Fig. 1 of Nakamura et al. shows a first position (Figs. 1 and 2) in which the third gear (64) is in direct engagement (i.e., a form of power-transmitting engagement) with the second gear (55), and the third gear (64) is in indirect engagement (i.e., another form of power-transmitting engagement) with the first gear (unnumbered gear between elements 55 and 5) via the second gear (55). Thus, all of the limitations of claim 1 are met.

Next, applicant argues

Neither Nakamura nor Miyauchi, alone or in combination, disclose or suggest an apparatus having means process saying transmission of power to a drive gear and creating a dwell after a first roller and a second roller have initially and simultaneously engaged a media sheet. In rejecting claim 2 which alter recites the creation of a dwell when the first roller and the second roller simultaneously engaged the media sheet, the Office Action attempted to additionally rely upon Nose et al. US Patent 6,168,147 by referring to element 10 of Nose. However, element 10 would not create a dwell. Element 10 appears to simply be a friction clutch. As one of ordinary skill in the art knows, a friction

clutch does not create a dwell. Accordingly, claim 25, as amended, overcome the rejection.

In response, in claim 25 in the recitation "means for cessating transmission of power to the drive gear **while creating a dwell after the first roller and the second roller have initially and simultaneously engaged a media sheet**" (emphasis added), it is the examiner's position that the elements of portion 61 rotate gear 64 to the dotted arrow position of Fig. 2 at some time **after** the first roller (21) and the second roller (5) have initially and simultaneously engaged a media sheet and before the feeding of the next sheet. During this time there is a dwell (i.e., a time delay) before gear 64 is rotated back to the position shown in Fig. 1, in which gear 64 engages the drive gear (55) again. Thus, this rotation of gear 64 also creates a dwell (i.e., a time delay) before gear 64 is rotated back to the position shown in Fig. 1, in which gear 64 engages the drive gear (55) again. Thus, all of the limitations of claim 25 are met.

Applicant's arguments with respect to claims 2, 3 and 6 have been considered but are moot in view of the new ground(s) of rejection. Claims 2, 3, 6 and 9 were previously rejected in view of either Nakamura in combination with Nose or Nakamura in combination with Miyauchi, and further in combination with Nose. Now, claims 2, 3 and 6 are rejected in view of Nakamura by itself or Nakamura in combination with Miyauchi. As explained in the rejections of claims 2, 3 and 6 above, these claims have conditional limitations that need not ever occur. Thus, these conditional limitations need not be given patentable weight. Claim 9 is objected to as being dependent upon a rejected

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base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 30-37, the rejections of these claims are outlined above.

Allowable Subject Matter

6. Claims 16-24 are allowed. Claims 7-9, 31 and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

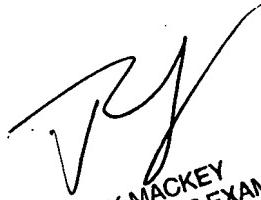
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Morrison whose telephone number is (571) 272-7221. The examiner can normally be reached on M-F, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on (571) 272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

8/6/2007



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